STATE FOREST LAND
ENVIRONMENTAL CHECKLIST

Purpose of Checklist:

The State Environmental Policy Act (SEPA), chapter 43.21C RCW, requires all governmental agencies to consider the environmental impacts of a proposal before making decisions. An environmental impact statement (EIS) must be prepared for all proposals with probable significant adverse impacts on the quality of the environment. The purpose of this checklist is to provide information to help you and the agency identify impacts from your proposal (and to reduce or avoid impacts from the proposal, if it can be done) and to help the agency decided whether an EIS is required.

Instructions for Applicants:

This environmental checklist asks you to describe some basic information about your proposal. Governmental agencies use this checklist to determine whether the environmental impacts of your proposal are significant, requiring preparation of an EIS. Answer the questions briefly, with the most precise information known, or give the best description you can. *Questions in italics are supplemental to Ecology's standard environmental checklist. They have been added by the DNR to assist in the review of state forestland proposals. Adjacency and landscape/ watershed-administrative-unit (WAU) maps for this proposal are available on the DNR internet website at http://www.dnr.wa.gov under "SEPA Center." These maps may also be reviewed at the DNR regional office responsible for the proposal. This checklist is to be used for SEPA evaluation of state forest land activities.*

You must answer each question accurately and carefully, to the best of your knowledge. In most cases, you should be able to answer the questions from your own observations or project plans without the need to hire experts. If you really do not know the answer, or if a question does not apply to your proposal, write "do not know" or "does not apply." Complete answers to the questions now may avoid unnecessary delays later. *All of the questions are intended to address the complete proposal as described by your response to question A-11. The proposal acres in question A-11 may cover a larger area than the forest practice application acres, or the actual timber sale acres.*

Some questions ask about governmental regulations, such as zoning, shoreline, and landmark designations. Answer these questions if you can. If you have problems, the governmental agencies can assist you.

The checklist questions apply to all parts of your proposal, even if you plan to do them over a period of time or on different parcels of land. Attach any additional information that will help describe your proposal or its environmental effects. The agency to which you submit this checklist may ask you to explain your answers or provide additional information reasonably related to determining if there may be significant adverse impact.

Use of checklist for nonproject proposals:

Complete this checklist for nonproject proposals, even though questions may be answered " does not apply." IN ADDITION, complete the SUPPLEMENTAL SHEET FOR NON PROJECT ACTIONS (part D).

For nonproject actions, the references in the checklist to the words "project," "applicant," and "property or site" should be read as "proposal," "proposer" and "affected geographic area," respectively.

A. BACKGROUND

1. Name of proposed project, if applicable: **Azul Timber Sale**

   Timber Sale Name: **Azul** *Agreement #:* **30-076371**

2. Name of applicant: **Department of Natural Resources**

3. Address and phone number of applicant and contact person:
   DNR Northwest Region
   919 North Township Street
   Sedro Woolley, WA 98284
   360-856-3500
   Contact Person: Candace Johnson
   Telephone: 360-856-3500

4. Date checklist prepared: **5/5/2004**

5. Agency requesting checklist: **Department of Natural Resources**

6. Proposed timing or schedule (including phasing, if applicable):

   a. *Auction Date:* **02/28/2005**
   b. *Planned contract end date (but may be extended):* **09/30/2007**
   c. *Phasing:* **DOES NOT APPLY**

7. Do you have any plans for future additions, expansion, or further activity related to or connected with this proposal? If yes, explain.

   Timber Sale

   a. *Site preparation:* **Treatment to be assessed in 2-3 years.**
   b. *Regeneration Method:* **Hand-plant with conifer seedlings.**
   c. *Vegetation Management:* **Treatment to be assessed in 3-5 years.**
   d. *Thinning:* **Treatment to be assessed in 10-15 years.**

   Roads:

   The BM-ML, SP-ML, and SP-02 roads will remain open and will continue to be used for future management activities.

   Rock Pits and/or Sale:

   The SP-02 hardrock pit will continue to be used and expanded upon in the future for management activities within the area.

   Other:
   None

8. List any environmental information you know about that has been prepared, or will be prepared, directly related to this proposal.

☐*303 (d) – listed water body in WAU:* ☐*temp* ☐*sediment* ☐*completed TMDL (total maximum daily load):*
☐*Landscape plan:*
☐*Watershed analysis:*
☐*Interdisciplinary team (ID Team) report:*
☒*Road design plan:* **Available at DNR Northwest Region office**
☒*Wildlife report:* **Wildlife Biologist Memo available at DNR Northwest Region office**
☐*Geotechnical report:*
☐*Other specialist report(s):*
☐*Memorandum of understanding (sportsmen's groups, neighborhood associations, tribes, etc.):*
☒*Rock pit plan:* **Available at DNR Northwest Region office**
☒*Other:* **State Soil Survey, 1992; Forest Resource Plan & Environmental Impact Statement, July 1992. Habitat Conservation Plan & Environment Impact Statement, September 1997.**

9. Do you know whether applications are pending for governmental approvals of other proposals directly affecting the property covered by your proposal? If yes, explain.

None known.

10. List any government approvals or permits that will be needed for your proposal, if known.

☒*HPA* ☐*Burning permit* ☐*Shoreline permit* ☐*Incidental take permit* ☒*FPA #* _____ ☐*Other:*

11. Give brief, complete description of our proposal, including the proposed uses and the size of the project and site. There are several questions later in this checklist that ask you to describe certain aspects of your proposal. You do not need to repeat those answers on this page. (Lead agencies may modify this form to include specific information on project description.)

a. Complete proposal description:

Considered Area/ Proposed Area: The area considered for potential harvest in the Azul timber sale included several hundred acres on the southern side of Blue Mountain and portions of Little Blue Mountain. Through office research and field reconnaissance, significant portions of the potential proposal area were eliminated due to potential conflicts with young stand adjacency issues, and immature stand ages for regeneration harvesting. One major priority of this proposal is to reconstruct the Blue Mountain road system. This further reduced the area of potential harvest, to areas that were near or adjacent to the road segments of interest. After riparian management zones and wetland management zones were delineated and areas of potential instability were demarcated from the potential harvest area, the result was the 79.8 gross acres that encompasses this proposal.

The roads for the proposal have been laid out to address resource protection objectives as well as operational feasibility. Along with the protection objectives, possible future timber sales were also considered when determining the desired road locations of this proposal. The rock pit to be used for the road construction and reconstruction activities will be the existing "SP-02" hardrock pit located in Section 12 of Township 28 North, Range 8 East, W.M.

Access to the proposal is available from public roads onto DNR land via Blue Mountain Mainline, which is accessible from the Sultan Basin Road. The timber harvest will be a combination of cable-yarding and ground-based operations. Seven percent of the existing merchantable trees equal to or greater than 12 inches diameter at breast height (dbh) will be retained as legacy trees and are either marked individually with blue paint or have "Leave Tree Area" tags around clumps of legacy trees. Legacy tree areas are positioned to surround individual or small clumps of windfirm trees, areas with more windfirm trees such as near open edges, or trees with greater wildlife potential.

A DNR NW Region Wildlife Biologist and the Soils/Hydrology Specialist have both visited the proposed sale area to evaluate for habitat and slope stability/water quality considerations. Following the harvest, the units will be hand-planted with a mix of conifer seedlings.

Sale area: **79.8 gross acres (including external road right-of- way)**
73.8 net acres (gross acres minus external road right-of-way and leave tree areas)

Est. Volume: **3,563 mbf**

Logging System: **Cable and Shovel**

Landings: **Approximately 7**

Roads: **Required Construction: 0 feet**
Optional Construction: 0 feet
Required Reconstruction: 14,470 feet
Required Abandonment: 0 feet
Culverts installed/replaced: 34

Rock Pits and/or sales: **Rock for road construction will be taken from the existing SP-02 hardrock pit located in Section 12 of Township 28 North, Range 8 East, W.M.**

Special Forest Product Sales: **None**

Other Related Actions: **None**

b. Timber stand description pre-harvest (include major timber species and origin date), type of harvest, overall unit objectives.

Pre-Harvest Stand Description: The timber stands within this proposal are primarily composed of western hemlock with lower levels of Douglas-fir, western redcedar, Pacific silver fir, and the occasional red alder and bigleaf maple in the lower elevations. Stands within the proposal are between 58 and 73 years old. The stands adjacent to this proposal have a similar species composition in the lower elevations ranges; however in the higher elevation areas adjacent to the proposal, the species composition moves toward a stand dominated by Pacific silver fir and Douglas-fir, with less frequent occurrences of western hemlock and western redcedar. The age of these adjacent stands range from 45 and 60 years old.

Type of harvest: A two-unit regeneration harvest

Overall unit objectives: Generate revenue from trust lands (07 Capital Building Trust and 03 Common School Trust); protect water quality; reconstruct portions of the Blue Mountain Mainline; maintain productivity on the site and maintain wildlife habitat through a tree retention strategy. This proposal meets or exceeds all of the guidelines and prescriptions set forth in the DNR Habitat Conservation Plan, Forest Resource Plan, and Forest Practices Rules and Regulations.

c. Road activity summary. See also forest practice application (FPA) for maps and more details.

Type of Activity	How Many	Length (feet) (Estimated)	Acres (Estimated)	Fish Barrier Removals (#)
Construction		**0**	**0**	**N/A**
Reconstruction		**14,470**		**0**
Abandonment		**0**	**0**	**N/A**
Bridge Install/Replace	**0**			**N/A**
Culvert Install/Replace (fish)	**0**			**N/A**
Culvert Install/Replace (no fish)	**34**			

12. Location of proposal. Give sufficient information for a person to understand the precise location of your proposed project, including a street address, if any, and section, township, and range, if known. If a proposal would occur over a range of area, provide the range or boundaries of the site(s). Provide a legal description, site plan, vicinity map, and topographic map, if reasonably available. While you should submit any plans required by the agency, you are not required to duplicate maps or detailed plans submitted with any permit applications related to this checklist. *(See timber sale map. See also color landscape/WAU map on the DNR website http://www.dnr.wa.gov under "SEPA Center.")*

a. Legal description:

Unit #1: Parts of Sections 1 and 2 of Township 28 North, Range 8 East, W.M.

Unit #2: Parts of Section 1 of Township 28 North, Range 8 East, W.M.

Right-Of-Way: Parts of Sections 1, 2, 10 and 11 of Township 28 North, Range 8 East, W.M.

Rock Pit: In parts of Section 12 of Township 28 North, Range 8 East, W.M.

b. Distance and direction from nearest town (include road names):

The entire proposal is located approximately eight miles northeast of the town of Sultan. The proposal can be reached from Highway 2 by driving approximately 6.6 miles north on Sultan Basin Road to the Blue Mountain Mainline gate. From the gate travel approximately 1.7 miles along the Blue Mountain Mainline to the Snohomish County PUD pipeline portal. This point is the beginning of the road reconstruction portion of this proposal.

c. Identify the watershed administrative unit (WAU), the WAU Sub-basin(s), and acres. (See also landscape/WAU map on DNR website http://www.dnr.wa.gov under " SEPA Center.")

Name	*Total Acres*	*Proposal Acres*
SULTAN RIVER WAU	**24,001**	**6.0**
Sultan River SUB-BASIN 6	**4,824**	**6.0**
OLNEY CREEK	**20,592**	**73.8**
Olney Creek SUB-BASIN 6	**5,888**	**73.8**

13. Discuss any known future activities not associated with this proposal that may result in a cumulative change in the environment when combined with the past and current proposal(s). (See digital ortho-photos for WAU and adjacency maps on DNR website http://www.dnr.wa.gov under "SEPA Center" for a broader landscape perspective.)

General Watershed Administrative Unit (WAU) information

Name of WAU	*Acres*	*DNR Acres*	*Non-DNR Acres*	*% DNR Land in WAU*	*% Non-DNR Land in WAU*	*Proposal Acres*	*% of total WAU in Proposal*	*% of DNR Land in Proposal*
Sultan River	**24,001**	**13,311**	**10,690**	**55 %**	**45 %**	**6.0**	**.02 %**	**.05 %**
Olney Creek	**20,592**	**8,879**	**11,713**	**43 %**	**57 %**	**73.8**	**.36 %**	**.83 %**

The majority of the land in both WAUs is designated for timber resource use, and has been so historically.
The nearest Natural Resource Conservation Area (NRCA) is over four miles to the northeast.

Past and Future DNR Activities in WAU

DNR Managed Lands – Past and Future Harvests within Sultan River WAU
(This proposal is included as part of the estimated acreage for future harvests over the year.)

SULTAN RIVER WAU	*Estimated Acreage Harvested in Past 7 Years*	*Est. Acreage for Future Harvests*	*Total Est. Acreage Past and Future*
Acres Within WAU	**1,580 even-age, 787 uneven-age**	**155 even-age, 0 uneven-age**	**2,522 acres**
% of WAU	**6.6% even-age, 3.3% uneven-age**	**.6% even-age**	**10.5 %**
% of DNR Acres	**11.9% even-age, 5.9% uneven-age**	**1.2% even-age**	**18.9 %**

OLNEY CREEK WAU	*Estimated Acreage Harvested in Past 7 Years*	*Est. Acreage for Future Harvests*	*Total Est. Acreage Past and Future*
Acres Within WAU	**613 even-age, 673 uneven-age**	**235 even-age, 0 uneven-age**	**1,521 acres**
% of WAU	**3.0% even age, 3.3% uneven age**	**1.1 % even-age**	**7.4 %**
% of DNR Acres	**6.9% even age, 7.6% uneven age**	**2.6 % even-age**	**17.1 %**

Data from DNR Database

DNR land comprises most of the northeastern half of the Sultan River WAU, and most of the northern half of the Olney Creek WAU. On DNR-managed lands within both WAU's, past activity has included timber harvesting and associated activities, which may include road building and abandonment, rock pit expansion, and silvicultural work. Future planned harvests, for the next year, consist of six proposals in the Sultan River WAU and five proposals in the Olney Creek WAU. Activities on DNR-managed land will follow Forest Practices Rules, HCP guidelines, and the Forest Resource Plan – policies designed to minimize environmental impacts. Future forest management activities in both WAU's include timber harvesting and associated activities. Cumulative impacts to the WAU are expected to be minimal.

Other Management in WAU's

SULTAN RIVER WAU
In the Sultan River WAU, non-DNR harvests over the past seven years have consisted of 813 acres of even-aged and 195 acres of uneven-aged cuts. Private landholdings are located mostly in the downstream reaches of the WAU in the south and southwest portions, with some private land in the northwest section as well. Municipalities hold land in the lower reaches of the Sultan River and Lake Chaplain, and the US Forest Service manages land in the upper reaches of the Sultan River. In the southwest portion, the town of Gold Bar and residences intermix with industry such as mining along the Skykomish. Further northward lie mainly residences and forestland. Areas to the northeast of DNR landholdings consist mainly of federal forestland. A strip of BLM land lies in the northwest section of the WAU.

OLNEY CREEK WAU
In the Olney Creek WAU, non-DNR harvests over the past seven years have consisted of 1,222 acres of even-aged and 1,580 acres of uneven aged cuts. On non-DNR lands, private landholdings are located mostly in the southern portion. There is some federal, municipal, county, and tribal ownership as well. The town of Startup is located in the southern portion near the Skykomish River.

Environmentally sensitive conditions occurring within the Olney Creek WAU include recorded presence of sensitive wildlife species; mountain quail, bald eagle, and osprey, marbled murrelet detection sites, and evidence of cavity-nesting ducks.

Proposal Specifics

- **A DNR NW Region Wildlife Biologist and Soils/Hydrology Specialist have both visited the proposal to evaluate for wildlife habitat impacts and slope stability/water quality considerations.**
- **A DNR NW Region Biologist verified that no suitable marbled murrelet habitat blocks currently exist within the boundaries of this proposal (the nearest marbled murrelet detection is over 0.5 miles to the northeast of Unit #2).**
- **Slope stability is a concern adjacent to proposal. There are areas that have likely failed due to past road construction activities in the area; however, this proposal is not in those areas, nor does the harvestable proposal area contain similar characteristics.**
- **Legacy trees were scattered and clumped to mitigate for any potential aesthetic impacts and to select those trees that have desirable wildlife characteristics.**
- **Riparian and wetland buffers were established according to HCP guidelines, and roads were designed to minimize construction, while providing the best possible access to the area in the future with minimal impact.**
- **All riparian management zones are no-harvest buffers. Equipment limitation zones associated with type 5 streams will involve harvest.**
- **There is one type 5 stream within Unit #2 and four type 5 streams adjacent to the western and eastern boundaries of Unit #1 – equipment will not cross this stream and all timber will be directionally felled and yarded away from the stream channel.**
- **This proposal is within the lower elevation reaches of the designated Peak Rain on Snow Zone, and according to the most recent data available, the sub basins that this proposal occupies are considered hydrologically mature.**

B. ENVIRONMENTAL ELEMENTS

1. Earth

a. General description of the site (check one):

☐Flat, ☐Rolling, ☐Hilly, ☒Steep Slopes, ☐Mountainous, ☐Other:

1) General description of the WAU or sub-basin(s) (landforms, climate, elevations, and forest vegetation zone).

The Sultan River WAU consists of level to rolling terrain in western areas and gradually moves towards hilly topography with occasional rock outcrops and steeper slopes in the northeast.

Elevation ranges from 89 feet above sea level to 3,095 feet (Mean = 1,002 ft.) across the WAU. Approximately two-thirds of the WAU receives 50-90 inches of rain per year. The southward flowing Sultan River bisects the WAU. Approximately 14% of the total WAU acreage falls within the significant-rain-on-snow (SROS) zone.

The southern and southwestern areas of the Olney WAU consist of rolling terrain with some steep slopes leading into incised stream channels that feed Olney Creek. Elevations range from 104 feet in Olney Creek to 1,200 feet at high points. Slopes average between 5% and 35%. The north and northeast portions generally are mountainous terrain characterized by steep slopes from major ridgelines. Elevations in this region of the WAU vary from 800 feet in Olney Creek to 4,815 feet at ridge tops, while slopes vary from 40% to 80%. Olney Creek flows southward through the WAU. Approximately 16% of the total WAU acreage falls within the SROS zone.

The greater parts of both WAU's are within the westside western hemlock forest vegetation zone, the largest vegetation zone in Washington. Both WAU's have annual precipitation in the lower range of the zone – 50-90 inches. Most of the forest stands in this zone are composed primarily of western hemlock with western redcedar in lower, wetter areas, and Douglas-fir and Pacific silver fir in higher, drier ones. Red alder, black cottonwood and bigleaf maple can also be found in smaller stands throughout the WAU's.

2) *Identify any difference between the proposal location and the general description of the WAU or sub-basin(s).*

The proposal lies at elevations between 1,500 – 2,250 feet. The proposal is within similar topographical features in regards to the steep slopes with areas of incised stream channels, however the proposal is near the base of these slopes. The proposal is in the lower elevation reaches of the designated Rain on Snow Zone, and according to the most recent data available, the sub basins that this proposal occupies are hydrologically mature.

b. What is the steepest slope on the site (approximate percent slope)?

***Unit #1*: approximately 75%**
***Unit #2*: approximately 65%**

c. What general types of soils are found on the site (for example, clay, sand, gravel, peat, muck)? If you know the classification of agricultural soils, specify them and note any prime farmland. *Note: The following table is created from state soil survey data. It is a roll-up of general soils information for the soils found in the entire sale area. It is only one of several site assessment tools used in conjunction with actual site inspections for slope stability concerns or erosion potential. It can help indicate potential for shallow, rapid soil movement, but often does not represent deeper soil sub-strata. The actual soils conditions in the sale area may vary considerably based on land-form shapes, presence of erosive situations, and other factors. The state soil survey is a compilation of various surveys with different standards.*

State Soil Survey #	Soil Texture	% Slope	Acres	Mass Wasting Potential	Erosion Potential
1955	**Silt Loam**	**3%-30%**	**10**	**Insignificant**	**Low**
1949	**Silt Loam**	**3%-30%**	**15**	**Insignificant**	**Low**
1956	**Silt Loam**	**30%-65%**	**55**	**Medium**	**Medium**

d. Are there surface indications or history of unstable soils in the immediate vicinity? If so, describe.

1) *Surface indications:*

There are surface indications of shallow rapid failures, most likely associated with improper road construction activities adjacent to Unit #1, and indications of possible bedrock hollows near the upper slopes of Blue Mountain, which is far outside of this proposal.

2) *Is there evidence of natural slope failures in the sub-basin(s)?*
☐*No* ☒*Yes, type of failures (shallow vs. deep-seated) and failure site characteristics:*

In the Sultan River WAU there is evidence of shallow slope failures on inner gorge slopes and below the ridgelines along Blue Mountain that are tributaries to the Sultan River gorge in sub–basin 6. Similarly, shallow rapid failures have occurred on inner gorges and very steep slopes in the upper portions of sub-basin 6 in the Olney Creek WAU. These areas are outside of the proposal area.

3) *Are there slope failures in the sub-basin(s) associated with timber harvest activities or roads?*
☐*No* ☒*Yes, type of failures (shallow vs. deep-seated) and failure site characteristics:*
Associated management activity:

Some localized failures have occurred due to road construction and harvest activities. These are generally associated with mid-slope roads on steeper slopes in upper elevations in portions of the Sultan River, and Olney Creek WAU's. There will be no road reconstruction is these type of areas.

4) *Is the proposed site similar to sites where slope failures have occurred previously in the sub-basin(s)?*
☐*No* ☒*Yes, describe similarities between the conditions and activities on these sites:*

The proposal is located within sub-basin 6, where there are areas that have shallow slope failures. However, the sale boundaries have been adjusted to ensure that these areas are not within the proposed harvest area.

5) *Describe any slope stability protection measures (including sale boundary location, road, and harvest system decisions) incorporated into this proposal.*

There is a small failure in proximity to Unit #1, which may have resulted from past improper road construction activities. To protect the stability of this area it has been bounded out of this proposal. There are also areas of inner gorge slopes within the western portion of Unit #1; however, due to a

riparian buffer these slopes are not located within the proposed harvest area. To minimize any adverse effects on the stability of the area, cable yarding will be required on all slopes steeper than 25%.

e. Describe the purpose, type, and approximate quantities of any filling or grading proposed. Indicate source of fill.
Approx. acreage new roads: **0** *Approx. acreage new landings:* **1** *Fill source:* **native material**

f. Could erosion occur as a result of clearing, construction, or use? If so, generally describe.

Little if any erosion will occur during road reconstruction and log transportation activities. However, to limit the potential of erosion, prudent road construction techniques and routine maintenance practices will be employed.

g. About what percent of the site will be covered with impervious surfaces after project construction (for example, asphalt or buildings)? *Approximate percent of proposal in permanent road running surface (includes gravel roads):*

No new areas within this proposal will be covered with impervious surfaces. Only road reconstruction work will be done with this proposal.

h. Propose measures to reduce or control erosion, or other impacts to the earth, if any:
(Include protection measures for minimizing compaction or rutting.)

To control road related erosion, culverts will be installed concurrently with reconstruction of the road sub-grade, and culvert outlets will not terminate on unprotected soils. All exposed soils resulting from road construction will be revegetated. At station 156+40 of the BM-ML road excavated slope will be armored with rip rap to prevent debris flow alluvium from blocking culvert.

2. Air

a. What types of emissions to the air would result from the proposal (i.e., dust *from truck traffic, rock mining, crushing or hauling,* automobile, odors, industrial wood smoke) during construction and when the project is completed? If any, generally describe and give approximate quantities if known.

No emissions are anticipated other than minor amounts of equipment exhaust and road dust created by log hauling activities. If burned, slash will be burned in adherence to Washington State's smoke management program.

b. Are there any off-site sources of emissions or odor that may affect your proposal? If so, generally describe.

None

c. Proposed measures to reduce or control emissions or other impacts to air, if any:

If slash is burned, it will be burned in adherence to the State's Smoke Management Program.

3. Water

a. Surface:

1) Is there any surface water body on or in the immediate vicinity of the site (including year-round and seasonal streams, saltwater, lakes, ponds, and wetlands)? If yes, describe type and provide names. If appropriate, state what stream or river it flows into. *(See timber sale map and forest practice base maps.)*

a) Downstream water bodies:

Olney Creek is approximately one mile downstream from the proposal area. This creek eventually feeds into the Wallace River, which then feeds into the Skykomish River near Sultan, WA.

b) Complete the following riparian & wetland management zone table:

Wetland, Stream, Lake, Pond, or Saltwater Name (if any)	Water Type	Number (how many?)	Avg RMZ/WMZ Width in Feet (per side for streams)
Non-forested Wetland (greater than 1 acre)	**A**	**1**	**162 feet**
Stream	**3**	**8**	**162 feet**
Stream	**4**	**6**	**100 feet**
Stream	**5**	**5**	**30-foot equipment limitation zone**
Wetland (less than .25 acres)	**Forested**	**1**	**30-foot equipment limitation zone – This is entirely within a type 3 riparian buffer**

c) List RMZ/WMZ protection measures including silvicultural prescriptions, road-related RMZ/WMZ protection measures, and wind buffers.

Unit #1:

- **30-foot equipment limitation zones will protect all type 5 streams.**
- **The type A wetland will be protected by a no-harvest, site class buffer of 162 feet.**
- **All type 3 streams will be protected by no-harvest, site class buffers of 162 feet.**
- **All type 4 streams will be protected by no-harvest, 100-foot buffers.**

Unit #2:

- **All type 3 streams will be protected by no-harvest, site class buffers of 162 feet.**

- **The type 5 stream will be protected by 30-foot equipment limitation zone.**
- **All type 4 streams will be protected by no-harvest, 100-foot buffers.**
- **The forested wetland less than .25 acres in size will be protected by a 30-foot equipment limitation zone that is entirely within a type 3 no-harvest riparian buffer.**

Road Related:

- **The reconstruction of the BM-ML will include installation of relief culverts prior to each stream crossing to minimize direct sediment input into the stream channel. All reconstructed road through RMZ's and WMZ's will be monitored during hauling to ensure ditchwater and road runoff will not enter or otherwise adversely affect water quality or RMZ/WMZ function. Straw bales, silt fencing, rock-lined ditches, and sediment traps will be installed/constructed if necessary to control road related erosion.**
- **Reconstruction work will cross one additional type 4 stream and one type 3 stream.**

2) Will the project require any work over, in, or adjacent to (within 200 feet) to the described waters? If yes, please describe and attach available plans.
☐*No* ☒*Yes (See RMZ/WMZ table above and timber sale map.)*
Description (include culverts):

Five type 4 stream crossings and one type 3 stream will be reconstructed as part of this proposal. This work will be done per HPA requirements. Based upon a site visit by WDFW representative the type 3 stream crossing will not be reconstructed as a fish passage structure.

3) Estimate the amount of fill and dredge material that would be placed in or removed from surface water or wetlands and indicate the area of the site that would be affected. Indicate the source of fill material.

None.

4) Will the proposal require surface water withdrawals or diversions? Give general description, purpose, and approximate quantities if known. *(Include diversions for fish-passage culvert installation.)*
☐*No* ☒*Yes, description:*
This work will be done per HPA conditions.

5) Does the proposal lie within a 100-year floodplain? If so, note location on the site plan.
☒*No* ☐*Yes, describe location:*

6) Does the proposal involve any discharges of waste materials to surface waters? If so, describe the type of waste and anticipated volume of discharge.
☒*No* ☐*Yes, type and volume:*

7) Does the sub-basin contain soils or terrain susceptible to surface erosion and/or mass wasting? What is the potential for eroded material to enter surface water?

There is a small failure in proximity to Unit #1, which may have resulted from past road construction activities. This area has been bounded out of this proposal. Due to the removal of this area from the proposal and the adjacent riparian buffers, there is little potential for eroded material to enter surface water.

8) Is there evidence of changes to the channels in the WAU and sub-basin(s) due to surface erosion or mass wasting (accelerated aggradations, erosion, decrease in large organic debris (LOD), change in channel dimensions)?
☐*No* ☒*Yes, describe changes and possible causes:*

Changes in stream channel dimensions/location and channel aggradation is apparent in the aerial photo record within sub-basin 6 of the Olney Creek WAU. These changes may be the result of mass wasting and peak flow changes in the upper elevations of the sub-basin.

9) Could this proposal affect water quality based on the answers to the questions 1-8 above?
☒*No* ☐*Yes, explain:*

10) What are the approximate road miles per square mile in the WAU and sub-basin(s)?
Are you aware of areas where forest roads or road ditches intercept sub-surface flow and deliver surface water to streams, rather than back to the forest floor?
☐*No* ☒*Yes, describe:*

There are approximately 3.5 road miles per square mile overall in the Sultan River WAU. Sub-basin 6 has approximately 3.4 road miles per square mile. There are approximately 4.2 road miles per square mile overall in the Olney Creek WAU, and sub-basin 6 has approximately 3.3 road miles per square mile.

There are areas on the eastern edge of Unit #1 that have been removed from the harvesting area where surface water has been delivered to adjacent streams, rather than back to the forest floor. This is most likely due to improper road construction techniques that have never been remedied. This proposal will remedy this situation. By using proper culvert placement and sizing, the surface flows will be redirected to stable portions of the forest floor.

*11) Is the proposal within a significant rain-on-snow (ROS) zone? If not, **STOP HERE** and go to question B-3-a-13 below. Use the WAU or sub-basin(s) for the ROS percentage questions below.*
☐*No* ☒*Yes, approximate percent of WAU in significant ROS zone.*
Approximate percent of sub-basin(s):

Sultan River WAU: 14%
Sub-basin 6: 27%

Olney Creek WAU: 16%

Sub-basin 6: 34%

12) *If the proposal is within the significant ROS zone, what is the approximate percentage of the WAU or sub-basin(s) within the significant ROS zone (all ownerships) that is (are) rated as hydrologically mature?*

On DNR managed lands:

Sultan River WAU:
Sub-basin 6: 96%

Olney Creek WAU:
Sub-basin 6: 88%

It is not known how many private acres in the Sub-basins are hydrologically mature. These figures are based on the latest information available prior to the proposal's activities

13) *Is there evidence of changes to channels associated with peak flows in the WAU or sub-basin(s)?*
☐*No* ☒*Yes, describe observations:*

See comment for B.3.a.8.

14) *Based on your answers to questions B-3-a-10 through B-3-a-13 above, describe whether and how this proposal, in combination with other past, current, or reasonably foreseeable proposals in the WAU and sub-basin(s), may contribute to a peak flow impact.*

This proposal should not provide any significant contribution to peak flow impacts in this WAU, even though the proposal is located in the lower elevation portions of the Rain-on-Snow zone in the Sultan River and Olney Creek WAU's. There are no-harvest riparian buffers of 162 feet established around all type 3 streams and wetlands larger than one acre, as well as 100-foot buffers protecting type 4 streams and 30-foot equipment limitation zones on all type 5 streams across the units. A significant increase in peak flow is unlikely. Refer to B-3-a-1-c and B-3-a-2 above.

15) *Is there water resource (public, domestic, agricultural, hatchery, etc.), or area of slope instability, downstream or downslope of the proposed activity that could be affected by changes in surface water amounts, quality, or movements as a result of this proposal?*
☒*No* ☐*Yes, possible impacts:*

The streams within and adjacent to the proposal area feed into Olney Creek, which eventually flows into the Skykomish River, which can be considered a public water resource due to its fish habitat. There are no anticipated impacts that will result from this proposal since all identified areas of instability have been removed from this proposal and no-harvest riparian buffers protect all typed streams. In addition, all constructed ditches, cross-drain culverts, drain dips, and water bars will be used to control runoff. Straw bales, silt fencing, rock-lined ditches, and sediment traps will be installed or constructed, if necessary, during the course of this proposal in order to prevent sediment movement. Roads and landings will be crowned to avoid water accumulation.

16) *Based on your answers to questions B-3-a-10 through B-3-a-15 above, note any protection measures addressing possible peak flow/flooding impacts.*

Refer to B-3-a-14.

b. Ground *Water*:

1) Will ground water be withdrawn, or will water be discharged to ground water? Give general description, purpose, and approximate quantities if known.

Channeling water through ditches and culverts emptying out onto the forest floor will increase surface saturation in localized areas, but is not expected to effect ground water.

2) Describe waste material that will be discharged into the ground from septic tanks or other sources, if any (for example: Domestic sewage; industrial, containing the following chemicals; agricultural; etc.). Describe the general size of the system, the number of such systems, the number of houses to be served (if applicable), or the number of animals or humans the system(s) are expected to serve.

Small amounts of oil and other lubricants could be discharged inadvertently as a result of heavy equipment use. No lubricants will be disposed of onsite.

3) *Is there a water resource use (public, domestic, agricultural, hatchery, etc.), or area of slope instability, downstream or down slope of the proposed activity that could be affected by changes in groundwater amounts, timing, or movements as a result this proposal?*
☒*No* ☐*Yes, describe:*

a) Note protection measures, if any.

None

c. Water Runoff (including storm water):

1) Describe the source of runoff (including storm water) and method of collection and disposal, if any (include quantities, if known). Where will this water flow? Will this water flow into other waters? If so, describe.

Runoff from the road surfaces will be collected in ditches and diverted to stable areas on the forest floor through the uses of ditches, culverts, and energy dissipaters.

2) Could waste materials enter ground or surface waters? If so, generally describe.

It is not anticipated that waste material will enter ground or surface water as a result of this proposal.

a) Note protection measures, if any.

None.

d. Proposed measures to reduce or control surface, ground, and runoff water impacts, if any:
(See surface water, ground water, and water runoff sections above, questions B-3-a-1-c, B-3-a-16, B-3-b-3-a, and B-3-c-2-a.)

Constructed ditches, cross-drain culverts, drain dips, and water bars will be used to control runoff on roads. Straw bales, silt fencing, rock-lined ditches, and sediment traps will be installed or constructed, if necessary, during the course of this proposal in order to prevent sediment movement. Roads and landings will be crowned to avoid water accumulation. Falling and yarding away from all seasonal streams will be applied where feasible. All activities associated with this proposal will meet or exceed Forest Practices standards and will follow the Habitat Conservation Plan.

4. Plants

a. Check or circle types of vegetation found on the site:

☒deciduous tree: ☒alder, ☒maple, ☐aspen, ☒*cottonwood,* ☐*western larch,* ☐*birch,* ☐other:
☒evergreen tree: ☒*Douglas fir,* ☐*grand fir,* ☒*Pacific silverfir,* ☐*ponderosa pine,* ☐*lodgepole pine,* ☒*western hemlock,* ☐*mountain hemlock,* ☐*Englemann spruce,* ☒*Sitka spruce,* ☒*redcedar,* ☐*yellow cedar,* ☐other:
☒shrubs: ☐*huckleberry,* ☒*salmonberry,* ☒*salal,* ☒*other:* **Oregon grape**
☐grass
☐pasture
☐crop or grain
☒wet soil plants: ☐cattail, ☐buttercup, ☐bullrush, ☒skunk cabbage, ☒*devil's club,* ☐other:
☐water plants: ☐water lily, ☐eelgrass, ☐milfoil, ☐other:
☐other types of vegetation:
☐*plant communities of concern:*

b. What kind and amount of vegetation will be removed or altered? *(See answers to questions A-11-a, A-11-b, B-3-a-1-b and B-3-a-1-c. The following sub-questions merely supplement those answers.)*

Approximately 93% of the existing, live, coniferous vegetation that meets current industry merchantability standards will be removed. 7% of the live merchantable timber that is best suited to the site, and /or exhibits desirable wildlife habitat characteristics will be left on site. Most of the current shrubs and herbaceous plants will be disturbed to varying degrees during the timber removal process of this proposed operation.

1) Describe the species, age, and structural diversity of the timber types immediately adjacent to the removal area. (See landscape/WAU and adjacency maps on the DNR website at: http://www.dnr.wa.gov under "SEPA Center.")

The timber stands adjacent to the proposal are primarily composed of western hemlock with lower levels of Douglas-fir, western redcedar, Pacific silver fir, and the occasional red alder and bigleaf maple in the lower elevations. The age of these stands range from 45 and 60 years old in the general vicinity of the proposal. In the higher elevation areas adjacent to the proposal the species composition moves towards stands dominated by Pacific silver fir and Douglas-fir, with less frequent occurrences of western hemlock and western redcedar.

2) Retention tree plan:

Legacy tree levels were determined in accordance with DNR Forestry Handbook Procedure PR 14-006-090 (May 2000). For the entire proposal 893 trees have been designated to leave; 560 in Unit #1, 333 in Unit #2. This represents 7% of the trees per acre greater than 12" dbh, according to the previously collected FRIS data. Legacy trees are clumped and scattered to ensure a variety trees are left that possess desirable wildlife characteristics. Selected leave trees are either in the dominant or co-dominant crown classes, containing structural characteristics important to wildlife, and those best suited to the site indicating wind firmness.

c. List threatened or endangered *plant* species known to be on or near the site.

None found in database search of DNR's TRAX system.

d. Proposed landscaping, use of native plants, or other measures to preserve or enhance vegetation on the site, if any:

Legacy retention trees will be left on site in both clumped and scattered patterns. (See B-4-b-2 above). Conifer seedlings (Douglas-fir and western redcedar at approximately 360 stems/acre) will be planted following completion of the proposal. Soils exposed due to road construction will be grass-seeded.

5. Animal

a. Circle *or check* any birds animals *or unique habitats* which have been observed on or near the site or are known to be on or near the site:

birds: ☒hawk, ☐heron, ☐eagle, ☒songbirds, ☐*pigeon,* ☒other: **Barred owl**
mammals: ☒deer, ☐bear, ☐elk, ☐beaver, ☐other:
fish: ☐bass, ☐salmon, ☐trout, ☐herring, ☐shellfish, ☐other:
unique habitats: ☐*talus slopes,* ☐*caves,* ☐*cliffs,* ☐*oak woodlands,* ☐*balds,* ☐*mineral springs*

b. List any threatened or endangered species known to be on or near the site *(include federal- and state-listed species).*

None found in database search of DNR's TRAX system.

A marbled murrelet occupied site is located over 0.5 miles to the northeast of Unit #2. A Northwest Region Biologist visited the site and determined there are no suitable marbled murrelet habitat blocks within the proposal area. See A.13.

c. Is the site part of a migration route? If so, explain.
☒*Pacific flyway* ☐*Other migration route:* *Explain if any boxes checked:*

All of Washington State is considered part of the Pacific flyway. No adverse impacts are anticipated as a result of this proposal.

d. Proposed measures to preserve or enhance wildlife, if any:

To protect water bodies, measures include riparian and wetland buffers. Constructed ditches, cross-drain culverts, drain dips, and water bars will be used to control runoff. Straw bales, silt fencing, rock-lined ditches, and sediment traps will be installed or constructed, if necessary, during the course of this proposal in order to prevent sediment movement. Roads and landings will be crowned to avoid water accumulation. Falling and yarding away from all seasonal streams will be applied when feasible. Legacy retention trees serve to increase varied wildlife habitat and all buffers assist wildlife corridors. All activities associated with this proposal will meet or exceed Forest Practices standards and the Habitat Conservation Plan. (See also B-1-h, B-3-a-1-b, B-3-a-1-c, B-3-d, B-4-b-2 and B-4-d).

6. Energy and Natural Resources

a. What kinds of energy (electric, natural gas, oil, wood stove, solar) will be used to meet the completed project's energy needs? Describe whether it will be used for heating, manufacturing, etc.

None.

b. Would your project affect the potential use of solar energy by adjacent properties? If so, generally describe.

No.

c. What kinds of energy conservation features are included in the plans of this proposal? List other proposed measures to reduce or control energy impacts, if any:

None.

7. Environmental Health

a. Are there any environmental health hazards, including exposure to toxic chemicals, risk of fire and explosion, spill, or hazardous waste, that could occur as a result of this proposal? If so, describe.

There is minimal hazard from heavy equipment operations. There is a slight chance of hydraulic or oil spills from equipment operating on the site. There is also a potential fire hazard if operations occur in moderate to severe fire weather conditions during summer months.

1) Describe special emergency services that might be required.

Does not apply.

2) Proposed measures to reduce or control environmental health hazards, if any:

Safe operation of all equipment will be encouraged. Industrial restrictions and precaution levels regarding forest fire protection will be enforced. The timber purchaser will be required to have fire suppression equipment on site during the restricted fire season while harvest activity is ongoing.

b. Noise

1) What types of noise exist in the area which may affect your project (for example: traffic, equipment, operation, other)?

None

2) What types and levels of noise would be created by or associated with the project on a short-term or long-term basis (for example: traffic, construction, operation, other)? Indicate what hours noise would come from this site.

Noise from road construction and harvest activity will be present in the immediate vicinity of this proposal during operations. Noise from log hauling will be present along the haul routes during operations.

3) Proposed measures to reduce or control noise impacts, if any:

None. Noise associated with harvest and road construction activity will be minimal anywhere but in the immediate vicinity of the proposal. Harvest activity and log hauling are historic activities in the area and noise should not be present above customary levels.

8. Land and Shoreline Use

a. What is the current use of the site and adjacent properties? *(Site includes the complete proposal, e.g. rock pits and access roads.)*

The surrounding area has been and will continue to be used for forest management. Additionally, there is a buried water pipeline in the area and various portals located along this pipeline within its associated right-of-way.

b. Has the site been used for agriculture? If so, describe.

No.

c. Describe any structures on the site.

There are no structures within or adjacent to the proposed harvesting units. However there is a portal to the Snohomish County PUD water pipeline immediately adjacent to some of the reconstruction roadwork that is associated with this sale. There is no anticipated impact on this structure or its associated pipeline.

d. Will any structures be demolished? If so, what?

No.

e. What is the current zoning classification of the site?

Commercial forestland.

f. What is the current comprehensive plan designation of the site?

Forestry.

g. If applicable, what is the current shoreline master program designation of the site?

Does not apply.

h. Has any part of the site been classified as an "environmentally sensitive" area? If so, specify.

None known.

i. Approximately how many people would reside or work in the completed project?

None.

j. Approximately how many people would the completed project displace?

None.

k. Proposed measures to avoid or reduce displacement impacts, if any:

None.

l. Proposed measures to ensure the proposal is compatible with existing and projected land uses and plans, if any:

The design of this project is consistent with current comprehensive plans and County zoning regulations.

9. Housing

a. Approximately how many units would be provided, if any? Indicate whether high, middle, or low-income housing.

Does not apply.

b. Approximately how many units, if any, would be eliminated? Indicate whether high, middle, or low-income housing.

None.

c. Proposed measures to reduce or control housing impacts, if any:

None.

10. Aesthetics

a. What is the tallest height of any proposed structure(s), not including antennas; what is the principle exterior building material(s) proposed?

Does not apply.

b. What views in the immediate vicinity would be altered or obstructed?

1) *Is this proposal visible from a residential area, town, city, developed recreation site, or a scenic vista?*
☐*No* ☒*Yes, viewing location:*

Small isolated portions of the northernmost parts of this proposal may be visible from various areas near Sultan, WA. The proposal was located as low on the hillside as possible to avoid a significant impact on the existing views. Leave tree patterns and Riparian Management Zones will help mitigate any visual impacts.

2) *Is this proposal visible from a major transportation or designated scenic corridor (county road, state or interstate highway, US route, river, or Columbia Gorge SMA)?*
☐*No* ☒*Yes, scenic corridor name:*

Small isolated portions of the northern most parts of this proposal may be visible from various areas along Highway 2 and the Sultan Basin Road.

3) *How will this proposal affect any views described in 1) or 2) above?*

This proposal may add to the existing multicohort landscape. Within the first four to five years, the proposal will add red and brown coloration to the existing landscape. Over this time period and thereafter the red and brown will transition to deep forest green as conifer seedlings dominate the site.

c. Proposed measures to reduce or control aesthetic impacts, if any:

Leave trees were marked in a clumped and scattered pattern in an attempt along with the riparian buffers to reduce the aesthetic impacts. The aesthetic impacts will be further reduced by the topographically isolated location of the majority of the proposal.

11. Light and Glare

a. What type of light or glare will the proposal produce? What time of day would it mainly occur?

None.

b. Could light or glare from the finished project be a safety hazard or interfere with views?

No.

c. What existing off-site sources of light or glare may affect your proposal?

None.

d. Proposed measures to reduce or control light and glare impacts, if any:

None.

12. Recreation

a. What designated and informal recreational opportunities are in the immediate vicinity?

No designated recreational opportunities currently exist. Informal use may include hunting, camping, hiking, mountain biking, or horseback riding.

b. Would the proposed project displace any existing recreational uses? If so, describe:

The road systems associated with this proposal are currently gated and closed to motorized vehicle use. Use of the proposal area by other users may be limited during the course of operations due to safety and security concerns. No permanent displacement of existing use will occur as a result of this proposal.

c. Proposed measures to reduce or control impacts on recreation, including recreation opportunities to be provided by the project or applicant, if any:

None. No permanent displacement of existing use will occur as a result of this proposal.

13. Historic and Cultural Preservation

a. Are there any places or objects listed on, or proposed for national, state, or local preservation registers known to be on or next to the site? If so, generally describe.

None known.

b. Generally describe any landmarks or evidence of historic, archaeological, scientific, or cultural importance known to be on or next to the site.

None known.

c. Proposed measures to reduce or control impacts, if any:
(Include all meetings or consultations with tribes, archaeologists, anthropologists or other authorities.)

None.

14. Transportation

a. Identify public streets and highways serving the site, and describe proposed access to the existing street system. Show on site plans, if any.

There are no public streets or highways that serve the site. There will be no addition of public roads to access the site as a result of this proposal.

1) Is it likely that this proposal will contribute to an existing safety, noise, dust, maintenance, or other transportation impact problem(s)?

No such indication.

b. Is site currently served by public transit? If not, what is the approximate distance to the nearest transit stop?

No.

c. How many parking spaces would the completed project have? How many would the project eliminate?

None.

d. Will the proposal require any new roads or streets, or improvements to existing roads or streets, not including driveways? If so, generally describe (indicate whether public or private).

This proposal will reconstruct approximately 14,470 feet of existing forest road. These roads have been and will continue to be off limits to public access due to problems with resource damage, trash dumping, and the proximity to a Snohomish County PUD water pipeline.

1) How does this proposal impact the overall transportation system/circulation in the surrounding area, if at all?

There are no expected adverse impacts on the overall transportation system of the surrounding area.

e. Will the project use (or occur in the immediate vicinity of) water, rail, or air transportation? If so, generally describe.

No.

f. How many vehicular trips per day would be generated by the completed project? If known, indicate when peak volumes would occur.

Approximately 10 trips per year would be required within the first 5-10 years for management purposes.

g. Proposed measures to reduce or control transportation impacts, if any:

None.

15. Public Services

a. Would the project result in an increased need for public services (for example: fire protection, police protection, health care, schools, other)? If so, generally describe.

No.

b. Proposed measures to reduce or control direct impacts on public services, if any.

Access will be restricted as needed during periods of extreme fire danger.

16. Utilities

a. Circle utilities currently available at the site: electricity, natural gas, water, refuse service, telephone, sanitary sewer, septic system, other.

DOES NOT APPLY

b. Describe the utilities that are proposed for the project, the utility providing the service, and the general construction activities on the site or in the immediate vicinity which might be needed.

None.